



Current State of Lung Cancer 2024: 4th Annual ELCN Gathering

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Founder and Chairperson, ELCN

Chief, Cancer Screenings, IU Health



Lung cancer related deaths in the U.S



| Decade | Deaths in Women | Deaths in Men | Deaths men & Women |
|--------------|----------------------|----------------------|----------------------|
| 1930s | 14,724 | 33,715 | 48,439 |
| 1940s | 28,087 | 94,325 | 122,412 |
| 1950s | 55,750 | 220,282 | 276,032 |
| 1960s | 77,505 | 404,780 | 482,285 |
| 1970s | 185,775 | 630,002 | 815,777 |
| 1980s | 334,558 | 830,655 | 1,165,213 |
| 1990s | 579,069 | 917,445 | 1,496,514 |
| 2000s | 684,174 | 894,825 | 1,578,999 |
| 2021s | 688,911 | 826,325 | 1,515,236 |
| 2020-present | 306,640 and counting | 346,268 and counting | 652,908 and counting |



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| 1970s | 185,775 | 630,002 | 815,777 |
| 65,790 more men and 59,280 more women have died due to lung cancer since last year's ELCN Gathering | | | |
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Cancer statistics, 2024



| | Male | | |  | Female | | |
|---------------------|--------------------------------|------------------|-----|---|--------------------------------|----------------|-----|
| | | | | | | | |
| Estimated New Cases | Prostate | 299,010 | 29% | | Breast | 310,720 | 32% |
| | Lung & bronchus | 116,310 | 11% | | Lung & bronchus | 118,270 | 12% |
| | Colon & rectum | 81,540 | 8% | | Colon & rectum | 71,270 | 7% |
| | Urinary bladder | 63,070 | 6% | | Uterine corpus | 67,880 | 7% |
| | Melanoma of the skin | 59,170 | 6% | | Melanoma of the skin | 41,470 | 4% |
| | Kidney & renal pelvis | 52,380 | 5% | | Non-Hodgkin lymphoma | 36,030 | 4% |
| | Non-Hodgkin lymphoma | 44,590 | 4% | | Pancreas | 31,910 | 3% |
| | Oral cavity & pharynx | 41,510 | 4% | | Thyroid | 31,520 | 3% |
| | Leukemia | 36,450 | 4% | | Kidney & renal pelvis | 29,230 | 3% |
| | Pancreas | 34,530 | 3% | | Leukemia | 26,320 | 3% |
| | All sites | 1,029,080 | | | All sites | 972,060 | |
| Estimated Deaths | Male | | |  | Female | | |
| | Lung & bronchus | 65,790 | 20% | | Lung & bronchus | 59,280 | 21% |
| | Prostate | 35,250 | 11% | | Breast | 42,250 | 15% |
| | Colon & rectum | 28,700 | 9% | | Pancreas | 24,480 | 8% |
| | Pancreas | 27,270 | 8% | | Colon & rectum | 24,310 | 8% |
| | Liver & intrahepatic bile duct | 19,120 | 6% | | Uterine corpus | 13,250 | 5% |
| | Leukemia | 13,640 | 4% | | Ovary | 12,740 | 4% |
| | Esophagus | 12,880 | 4% | | Liver & intrahepatic bile duct | 10,720 | 4% |
| | Urinary bladder | 12,290 | 4% | | Leukemia | 10,030 | 3% |
| | Non-Hodgkin lymphoma | 11,780 | 4% | | Non-Hodgkin lymphoma | 8,360 | 3% |
| | Brain & other nervous system | 10,690 | 3% | | Brain & other nervous system | 8,070 | 3% |
| | All sites | 322,800 | | | All sites | 288,920 | |

Estimates are rounded to the nearest 10, and cases exclude basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder. Estimates do not include Puerto Rico or other US territories. Ranking is based on modeled projections and may differ from the most recent observed data.

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CA A Cancer J Clinicians, Volume: 74, Issue: 1, Pages: 12-49, First published: 17 January 2024, DOI: (10.3322/caac.21820)



INDIANA UNIVERSITY MELVIN AND BREN SIMON COMPREHENSIVE CANCER CENTER

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2nd most common cancer in men and women

Leading cause of cancer-death in men and women

In 2024, more women were diagnosed with lung cancer than men





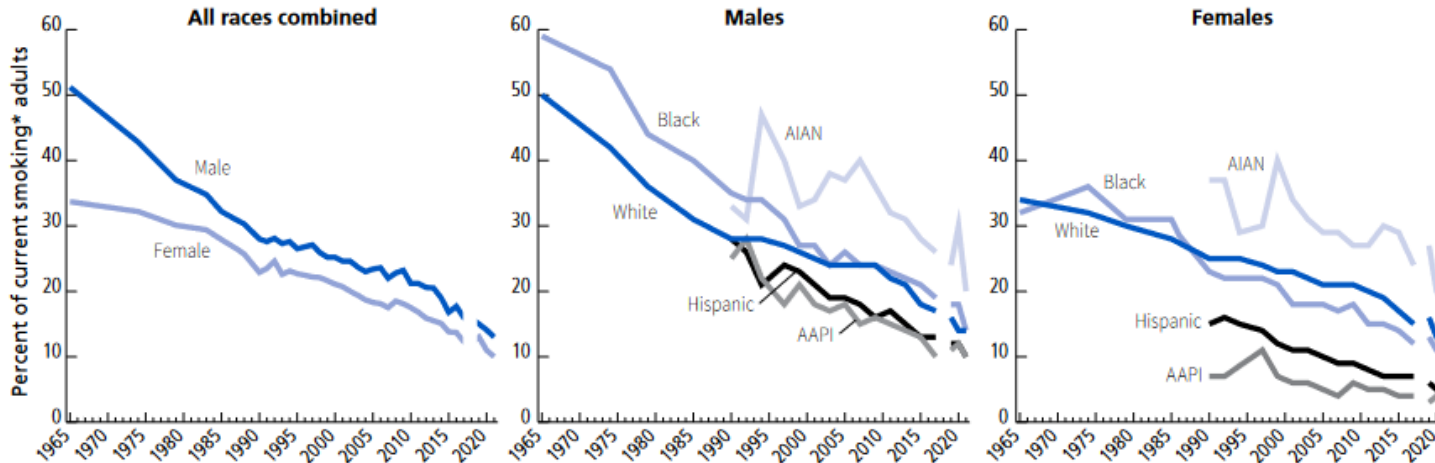
Lung cancer cases by state: 2024

- Indiana ranks # 6 amongst men and # 5 amongst women in incidence
 - 5,930 new cases
- Indiana ranks # 8 amongst men and #8 amongst women in death
 - 3,390 deaths



Cigarette consumption is declining across all groups in the U.S.

Figure S4. Trends in Smoking Prevalence by Sex, Race, and Ethnicity, US, 1965-2021



AAPI: Asian American and Pacific Islander individuals; AIAN: American Indian and Alaska Native individuals. *Ever smoked 100 cigarettes in lifetime and now smoke every day or some days. All racial groups are exclusive of individuals identifying as Hispanic beginning in 1990. All estimates are age adjusted. Due to changes in National Health Interview Survey (NHIS) survey design, estimates from 2019 onward are not directly comparable to prior years and are separated from the trend line.

Sources: Adult cigarette smoking prevalence 1965-2018, Health United States: 2019; NHIS 1990-2021.

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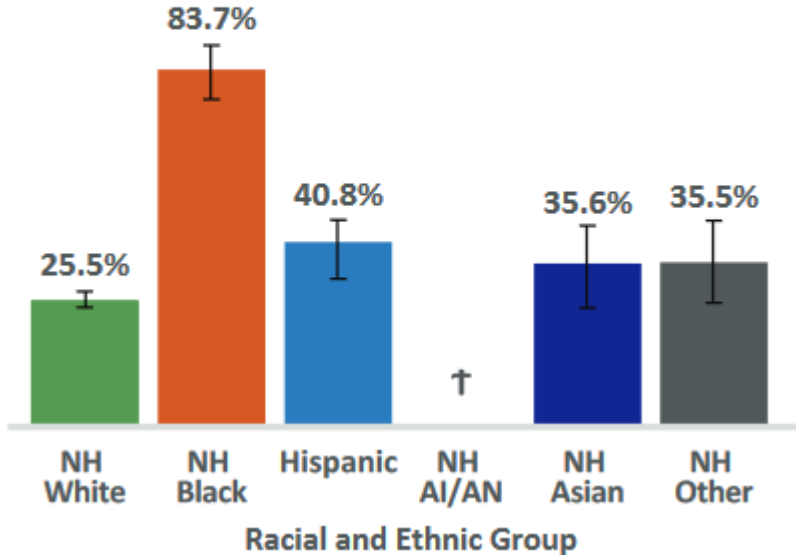


Menthol flavored cigarettes are a BIG PROBLEM



By Race and Ethnicity^d:

Current menthol cigarette smoking ranged from nearly 26 in 100 among Non-Hispanic (NH) White adults to nearly 84 in 100 among NH Black adults.



ALA 2024 State of Tobacco Control Report

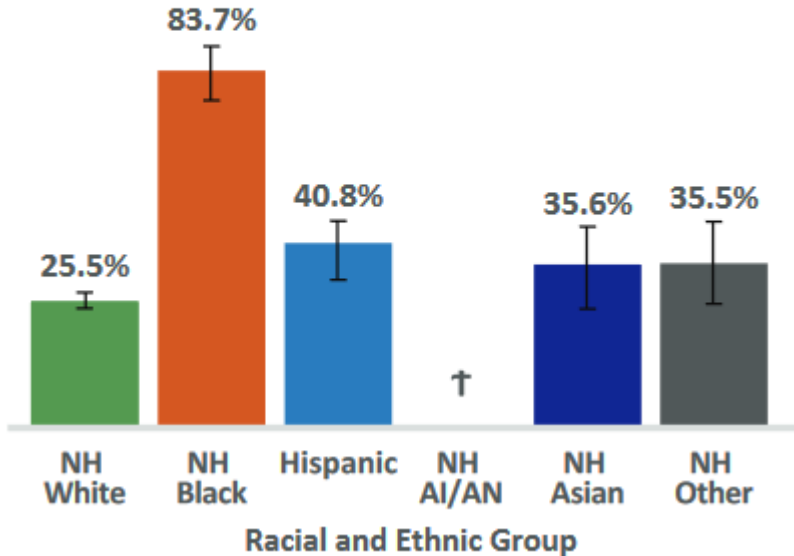


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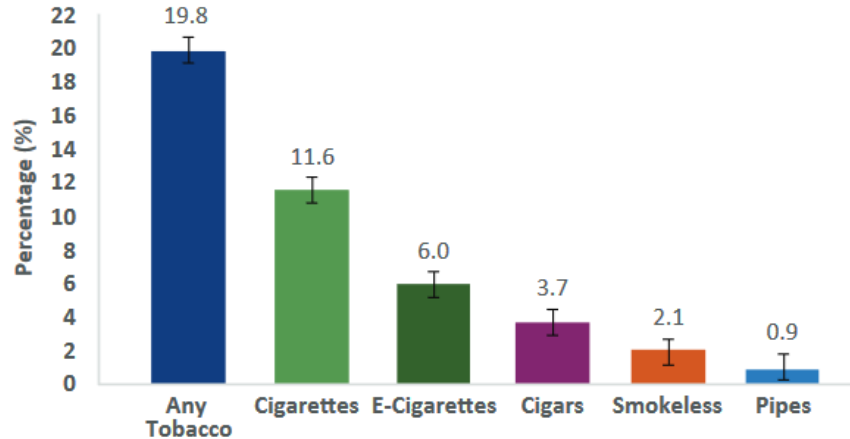
- Menthol cigarettes and flavors in cigars make it easier for kids to start smoking and harder for people to quit.
- Due in large part to tobacco industry marketing, over 80% of Black Americans who smoke use menthol cigarettes.

ALA 2024 State of Tobacco Control Report



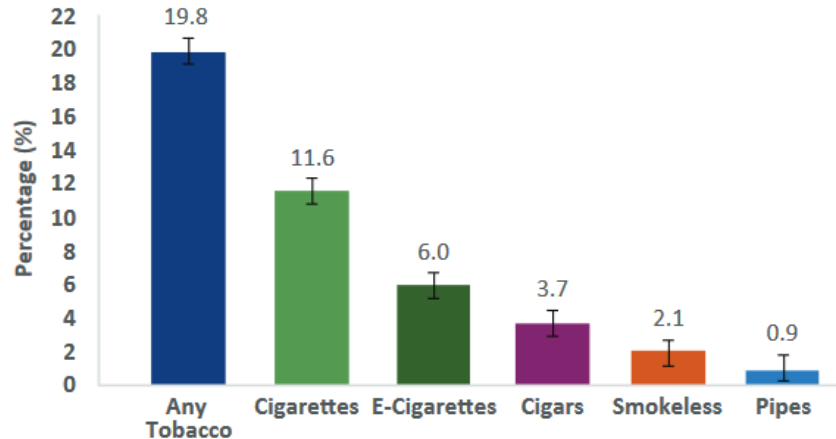
TOBACCO PRODUCT USE AMONG ADULTS— United States, 2022

2022 National Health Interview Survey (NHIS) Highlights



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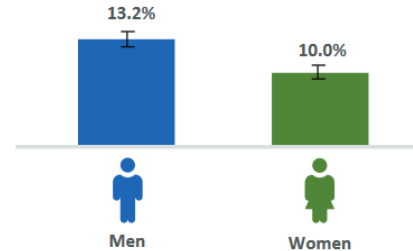


Tobacco Product Use – Cigarettes

Cigarettes were the most commonly used tobacco product among adults in 2022. As shown below, prevalence of cigarette smoking was higher in certain population groups.

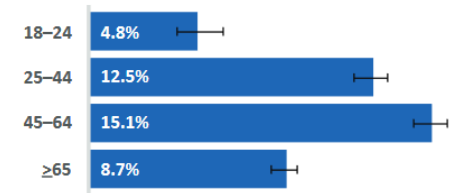
By Sex:

About 13 in 100 men currently smoked cigarettes compared with 10 in 100 women.



By Age (in years):

Current cigarette smoking ranged from nearly 1 in 20 among adults aged 18–24 years to 3 in 20 among adults aged 45–64 years.

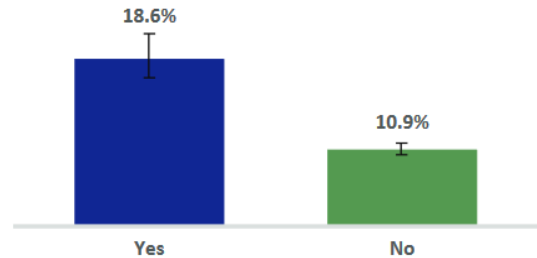


TOBACCO PRODUCT USE AMONG ADULTS— United States, 2022

2022 National Health Interview Survey (NHIS) Highlights

By Disability Status*

About 19 in 100 adults with a disability smoked cigarettes compared with 11 in 100 adults without a disability.



■ Adults with a disability

■ Adults without a disability



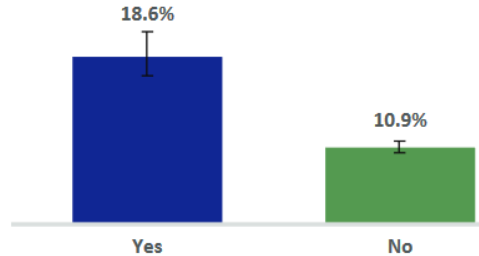
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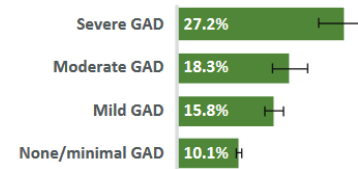
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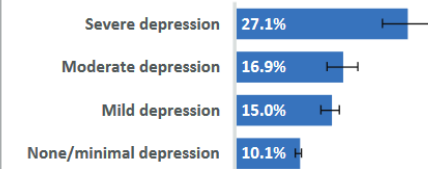
By Current Generalized Anxiety Disorder (GAD)^b:

Current cigarette smoking ranged from 10 in 100 among adults with no or minimal GAD to 27 in 100 among adults with severe GAD.



By Current Depression^c:

Current cigarette smoking ranged from 10 in 100 among adults with no or minimal depression to 27 in 100 among adults with severe depression.



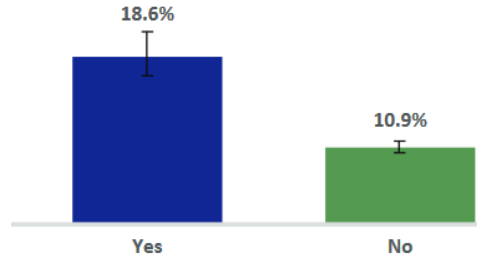
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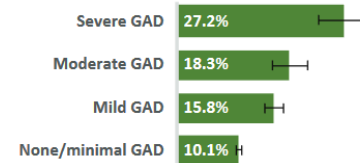
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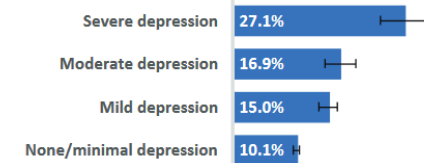
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Cigarettes are disproportionately consumed by vulnerable populations to medicate emotional pain and distress.





Tobacco Prevention and Control Program Funding:

Tobacco Taxes:

Smokefree Air:

Access to Cessation Services:

Flavored Tobacco Products:

F

F

C

C

F



ALA 2024 State of Tobacco Control: Indiana



State Facts:

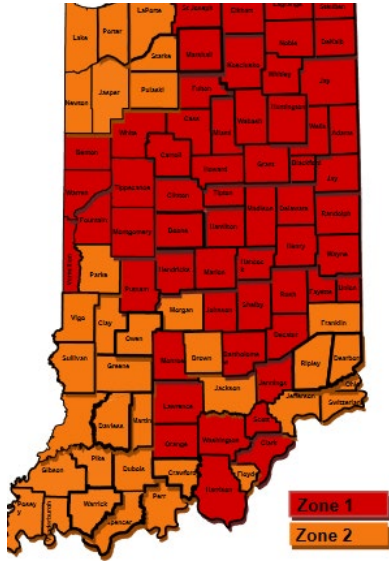
| | |
|-----------------------------------|-----------------|
| Health Care Costs Due to Smoking: | \$2,930,404,456 |
| Adult Smoking Rate: | 16.2% |
| High School Smoking Rate: | 4.2% |
| High School Tobacco Use Rate: | N/A |
| Middle School Smoking Rate: | 1.9% |
| Smoking Attributable Deaths: | 11,070 |



Indiana State Department of Health
Lead & Healthy Homes Division
INDIANA RADON HOTLINE = 1-800-272-9723

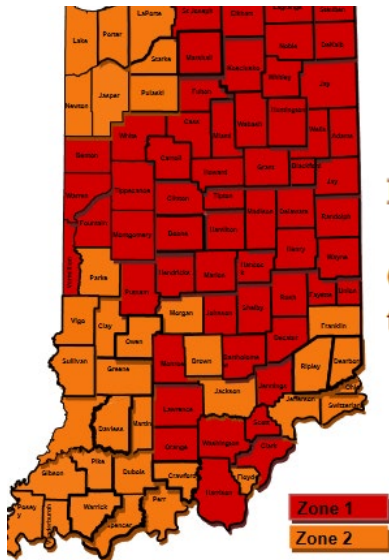


RADON FACT SHEET FOR INDIANA



INDIANA UNIVERSITY MELVIN AND BREN SIMON COMPREHENSIVE CANCER CENTER

RADON FACT SHEET FOR INDIANA



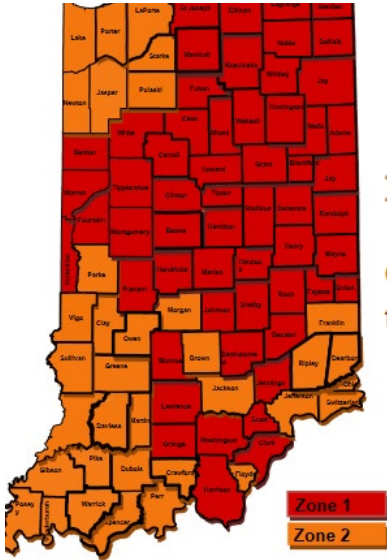
Red= High Potential for radon in the soil.

Orange= Moderate Potential for radon in the soil



RADON FACT SHEET FOR INDIANA

Nearly 1 out of 3 homes in Indiana have high radon levels



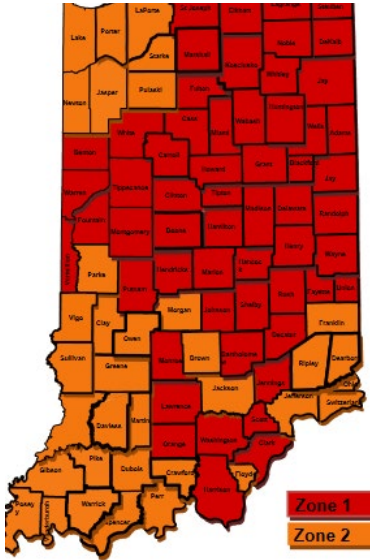
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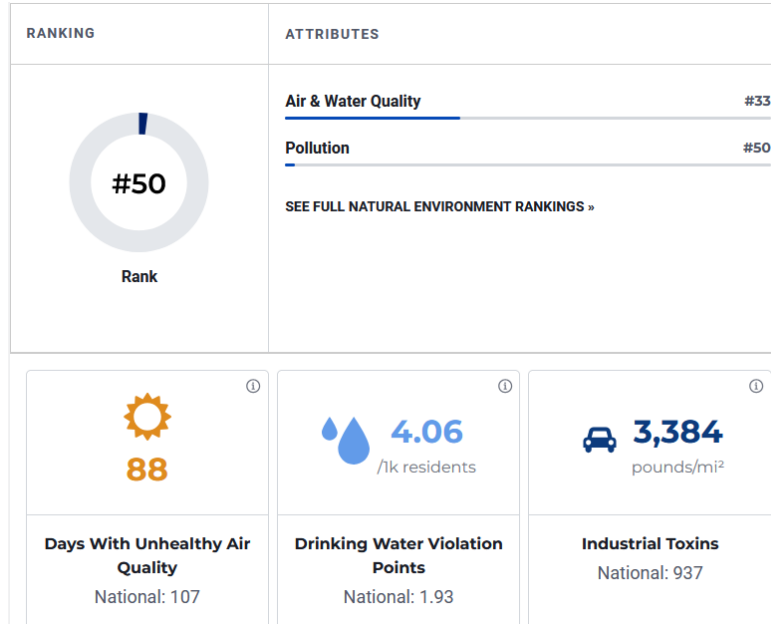
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| Radon Level Annual Average | Lung Cancer Risk For people who Never Smoked | Lung Cancer Risk For people who Smoke |
|---------------------------------------|---|--|
| 20 pCi/L | 36 out of 1,000 | 260 out of 1,000 |
| 10 pCi/L | 18 out of 1,000 | 150 out of 1,000 |
| 8 pCi/L | 15 out of 1,000 | 120 out of 1,000 |
| 4 pCi/L | 7 out of 1,000 | 62 out of 1,000 |
| 2 pCi/L | 4 out of 1,000 | 32 out of 1,000 |







US News and World Report: Indiana



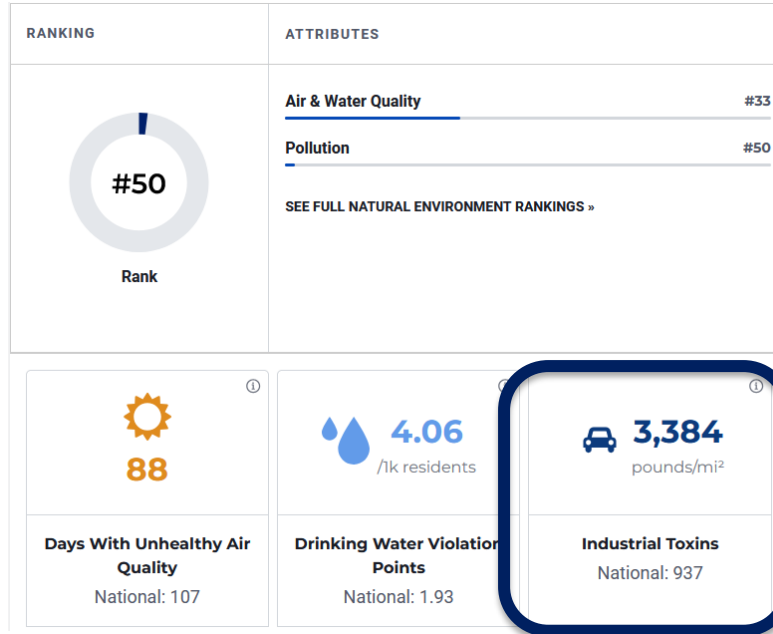
US News and World Report: Indiana



| RANKING | ATTRIBUTES | |
|--|--|---|
|  <p>#50</p> <p>Rank</p> | <p>Air & Water Quality #33</p> <hr/> <p>Pollution #50</p> <hr/> <p>SEE FULL NATURAL ENVIRONMENT RANKINGS »</p> | |
|  <p>88</p> |  <p>4.06</p> <p>/1k residents</p> |  <p>3,384</p> <p>pounds/mi²</p> |
| <p>Days With Unhealthy Air Quality</p> <p>National: 107</p> | <p>Drinking Water Violation Points</p> <p>National: 1.93</p> | <p>Industrial Toxins</p> <p>National: 937</p> |



US News and World Report: Indiana



Report Card: Indiana

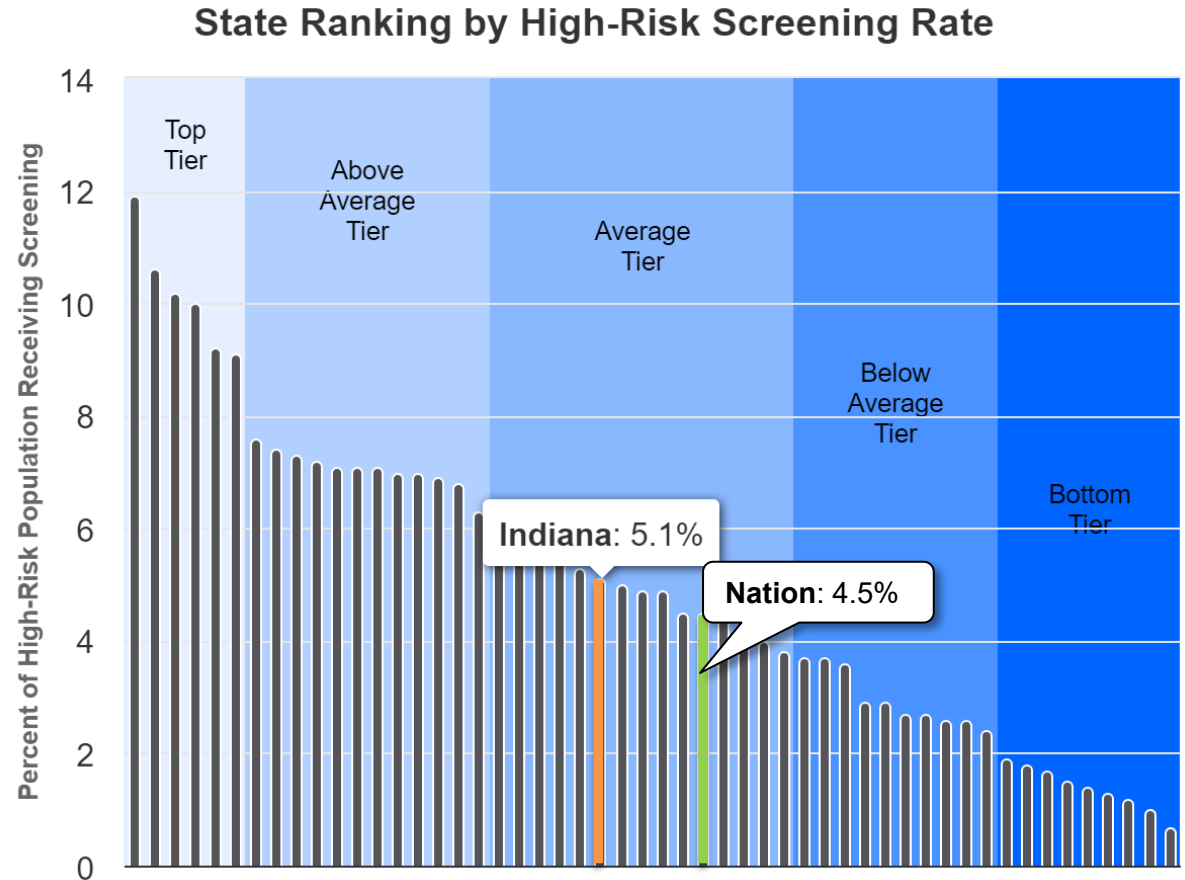


| County | Grade | Wgt. Avg. |
|-------------|-------|-----------|
| Bartholomew | A | 0.0 |
| Clark | A | 0.0 |
| Delaware | A | 0.0 |
| Dubois | A | 0.0 |
| Elkhart | C | 2.0 |
| Greene | A | 0.0 |
| Hamilton | A | 0.0 |
| Henry | A | 0.0 |
| Howard | A | 0.0 |
| LaPorte | B | 0.3 |
| Lake | C | 1.5 |
| Madison | A | 0.0 |
| Marion | F | 6.5 |
| Monroe | A | 0.0 |
| Porter | C | 1.2 |
| Spencer | A | 0.0 |
| St. Joseph | C | 1.5 |
| Tippecanoe | A | 0.0 |
| Vanderburgh | B | 0.7 |
| Vigo | B | 0.7 |
| Whitley | B | 0.3 |



Lung Cancer Screening Rates are VERY LOW

This compares to 65-75% screening rates for colon and breast cancer, respectively

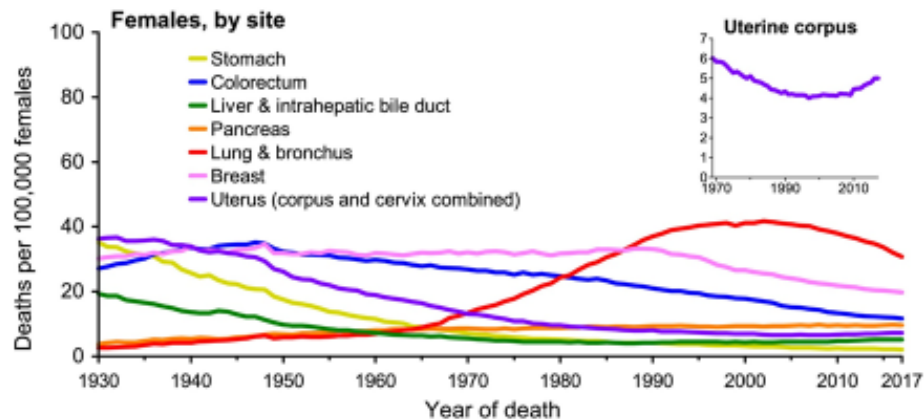
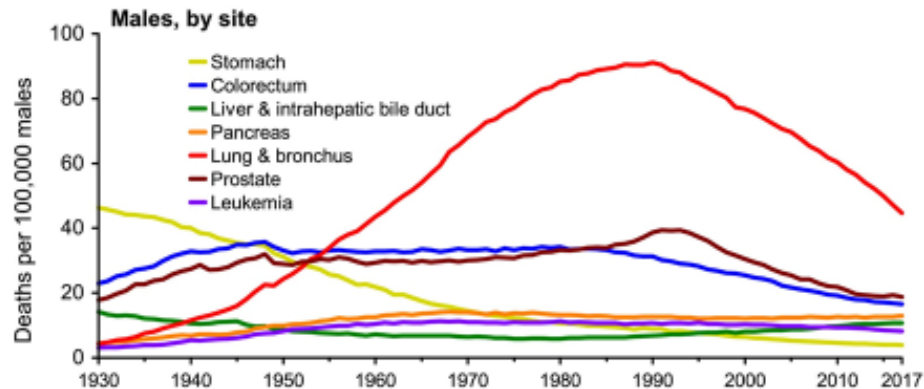


Source: American Lung Association – 2023 State of Lung Cancer: <https://www.lung.org/research/state-of-lung-cancer/states/indiana>



Therapeutic Advances

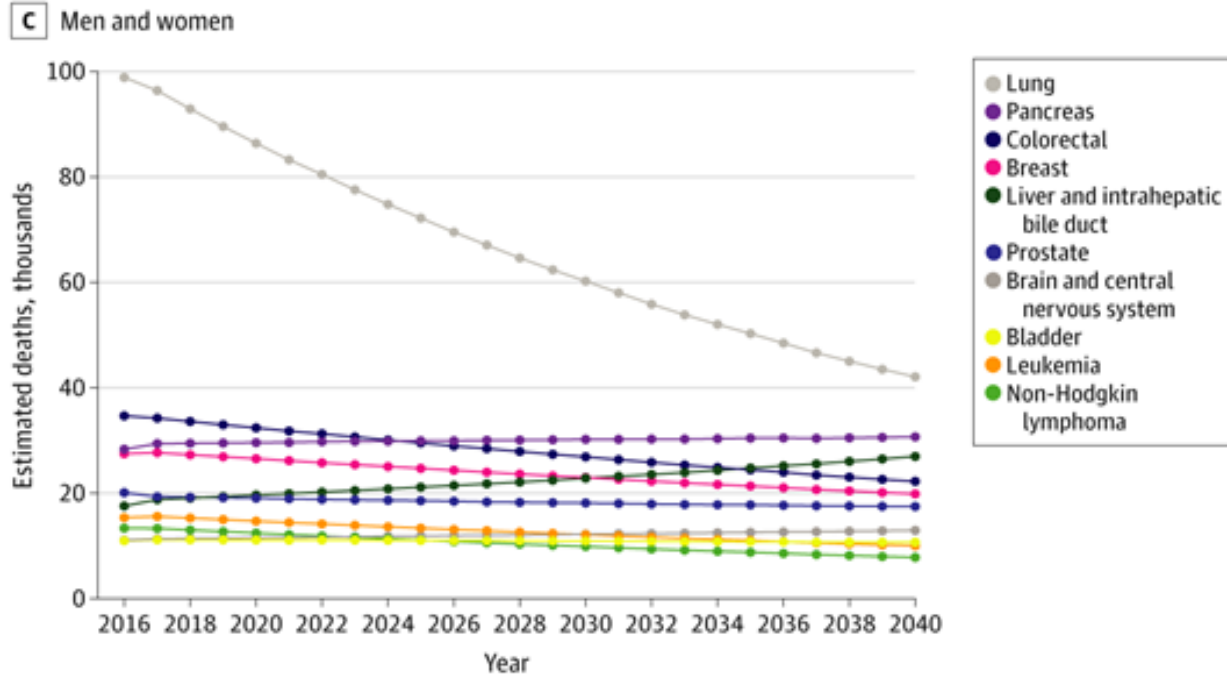
- Immunotherapy prior to and/or after surgery for NSCLC
- Molecularly targeted therapy after surgery for early-stage NSCLC
- Molecularly targeted therapy after chemo plus radiation for stage III NSCLC
- Immunotherapy after chemo plus radiation for limited stage SCLC
- New immunotherapy combinations and antibody drug conjugates on the way
- Next generation targeted therapies look promising



CA: A Cancer Journal for Clinicians, Volume: 70, Issue: 1, Pages: 7-30;2020

Cancer-death projections by 2040

Rahib L et al, JAMA Network 2021;4(4):e214708





In summary,

- We are making transformational progress in the war against lung cancer
 - Prevention
 - Early Detection
 - Therapeutics
 - Advocacy
- NOW is the time to accelerate all these efforts.
 - We must avoid complacency and satisfaction with current progress



So, let us continue the work with these guiding ideals

-



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- While **We** are making progress, thousands of Hoosiers are still dying every year from lung cancer



So, let us continue the work with these guiding ideals



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 - ❖ Let **us** resolve not to forget.



So, let us continue the work with these guiding ideals



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 - ❖ This is a **shared** obligation and **anyone who bears witness can and should do something about it.**



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 - ❖ **WE** remain committed and not just interested.



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 - ❖ This is a **shared** obligation and **anyone who bears witness can and should do something about it.**
 - ❖ **WE** remain committed and not just interested.
 - ❖ While the mission is difficult, **WE** have the capacity to do it!



Thank you for attending



“Every time *someone*...acts to improve the lot of others...*they* send forth a tiny ripple of hope, and crossing each other from a million different centers of energy and daring, those ripples build a current that can sweep down the mightiest walls...”

~Paraphrasing RFK (*italicized words are substitutions*)

